

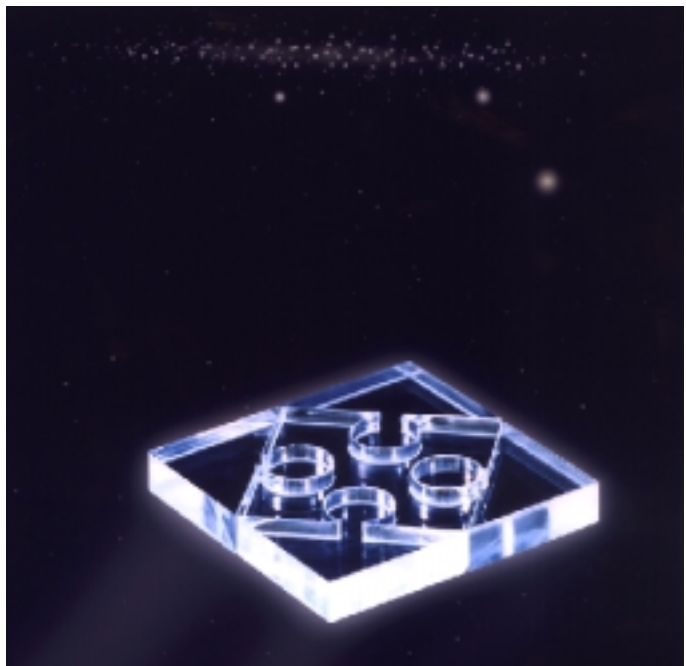
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# Axyz

## **StartUpLT OCX**

**Programmers Reference**

**Version 1.4.0**



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***Leica***

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# 1 StartUpLT

The OCX supports the following functions:

## 1.1 General

Most commands return a BOOLEAN indicating success or failure. In the case of a failure, the command "GetLastErrorString" can be called. A more descriptive explanation is then returned, giving additional information what caused the problem.

## 1.2 StartUpLT.Connect (LaserTrackerLANNumber)

Make a connection to a Laser Tracker using this command. It takes a "short" parameter indicating the LAN number of the Laser Tracker controller. This number can be set using the AXYZ "Renamer" utility. (For additional information on the Renamer utility, please consult the AXYZ documentation).

## 1.3 StartUpLT.StartUp

This command does not take any parameters. It does the following:

- Boot the Laser Tracker controller.
- Transfer the current calibration parameters to the controller.
- Initialize the Laser Tracker.

## 1.4 StartUpLT.GoBirdBath (ReflectorName)

This command is used to change the current reflector type and to send the Laser Tracker to the BirdBath position. Setting thereby the initial distance of the laser interferometer. The supplied reflector name must be the name of a reflector, that exists in the AXYZ database.

The command returns a BOOLEAN. Please consult "GetLastErrorString" in case of failure for the exact description of the problem.

## 1.5 StartUpLT.SetAtmosParameters (Temperature, Pressure)

In order for the Laser Tracker to work properly, the exact temperature and pressure values must be known. The StartUpLT OCX will calculate the necessary refraction values and transfer them to the controller.

The supplied temperature parameter must be in grad Celsius. The pressure parameter must be specified in mBar. Both parameters must be valid (e.g. temperature 10 – 50 grad Celsius ; pressure 800 – 1050 mBar).

## 1.6 StartUpLT.GetLastErrorString()

In case of failure of any above mentioned commands, call this function. It will return a string, explaining in detail what caused the previous command to fail.

## 1.7 StartUpLT.DisConnect

Close the connection to a Laser Tracker, if it existed. This command is not compulsory, the OCX will disconnect automatically upon termination.

## 1.8 Advanced Commands

### 1.8.1 StartUpLT.SetHostNumber 50

This function can be used, if the OCX must communicate on a specific LAN number. The default number is 0 (ZERO). Use a different hostnumber, if the OCX has to work in parallel with a running LTM, since also LTM uses the hostnumber 0.

### 1.8.2 StartUpLT.SetLANANumber 0

This function can be used, if the OCX must communicate on a specific LAN number. The default number after a typical XYZ installation is 0 (ZERO).

## 2 Sample Program

```
Private Sub Command1_Click()
```

```
    StatusDispl.Text = "Connecting ..."  
    StatusDispl.Refresh
```

```
    Status = StartUpLT.Connect(1)
```

```
    If (Status) Then
```

```
        StatusDispl.Text = "Ready"
```

```
    Else
```

```
        StatusDispl.Text = StartUpLT.GetLastErrorString()
```

```
    End If
```

```
End Sub
```

```
Private Sub Command2_Click()
```

```
    StatusDispl.Text = "Initializing tracker ..."  
    StatusDispl.Refresh
```

```
    Status = StartUpLT.StartUp
```

```
    If (Status) Then
```

```
        StatusDispl.Text = "Ready"
```

```
    Else
```

```
        StatusDispl.Text = StartUpLT.GetLastErrorString()
```

```
    End If
```

```
End Sub
```

```
Private Sub Command3_Click()
```

```
    StatusDispl.Text = "Disconnecting ..."  
    StatusDispl.Refresh
```

```
    StartUpLT.DisConnect
```

```
    StatusDispl.Text = "Not connected"
```

```
End Sub
```

```
Private Sub Command4_Click()
```

```
    StatusDispl.Text = "Set atmospheric parameters ..."
```

```
    StatusDispl.Refresh
```

```
    Status = StartUpLT.SetAtmosParameters(TempVal.Text, PressVal.Text)
```

```
If (Status) Then
    StatusDispl.Text = "Atmospheric parameters set"
Else
    StatusDispl.Text = StartUpLT.GetLastErrorString()
End If
```

```
End Sub
```

```
Private Sub Command5_Click()
```

```
    StatusDispl.Text = "Go BirdBath ..."
    StatusDispl.Refresh
```

```
    Status = StartUpLT.GoBirdBath(ReflectorCombo.Text)
```

```
If (Status) Then
    StatusDispl.Text = "Ready"
Else
    StatusDispl.Text = StartUpLT.GetLastErrorString()
End If
```

```
End Sub
```

```
Private Sub Form_Load()
```

```
    StatusDispl.Text = "Not connected"
```

```
    TempVal.Text = 22.5
    PressVal.Text = 978.5
```

```
    StartUpLT.SetHostNumber 50
    StartUpLT.SetLANANumber 0
```

```
End Sub
```